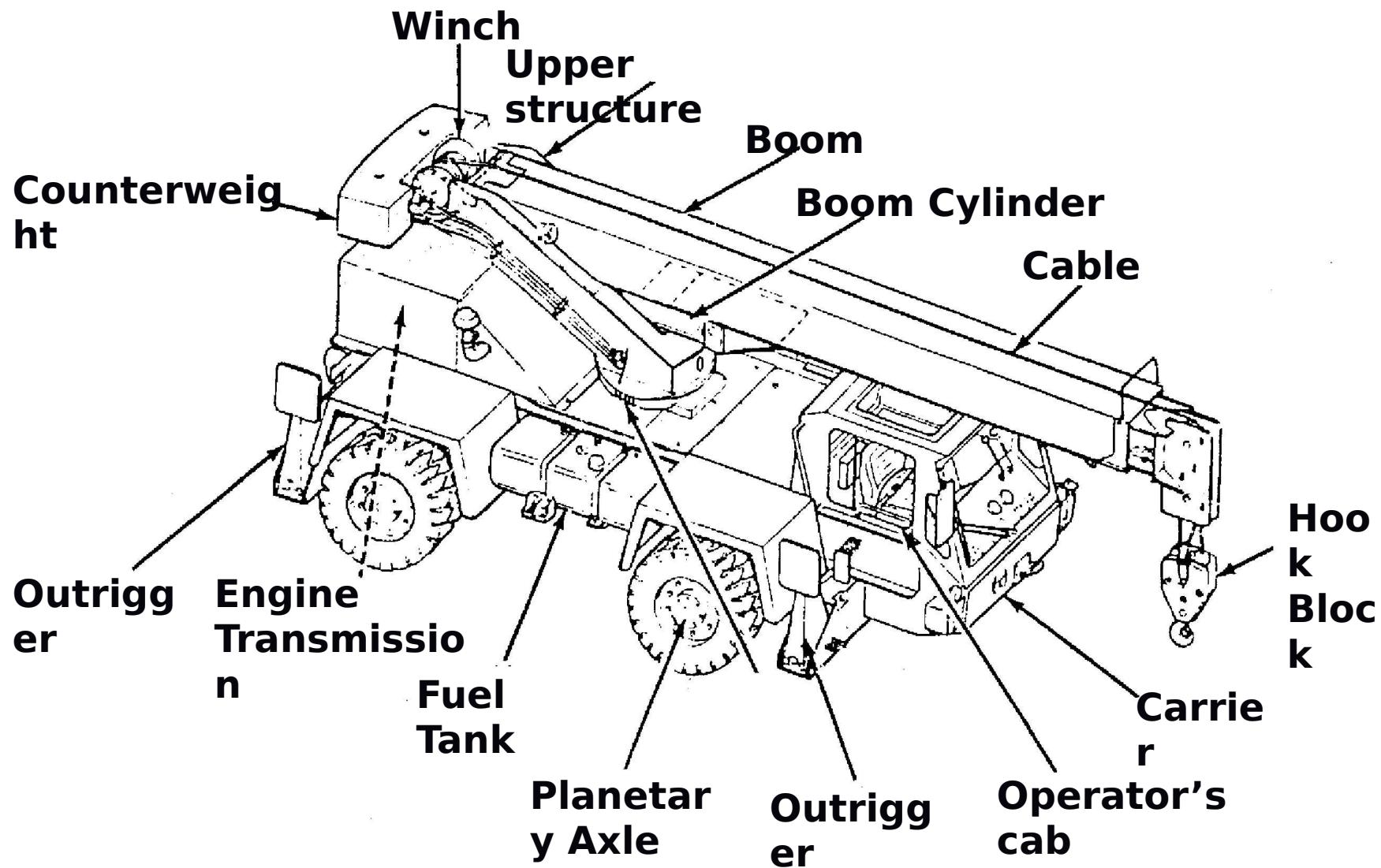


LRT 110

■ GySgt Brubaker



LRT 110



LRT-110

- **7 1/2 ton**
- **4 wheel drive**
- **4 wheel steer**
- **Diesel engine**
- **Hydraulic crane**
- **Designed for normal lifting operations.**

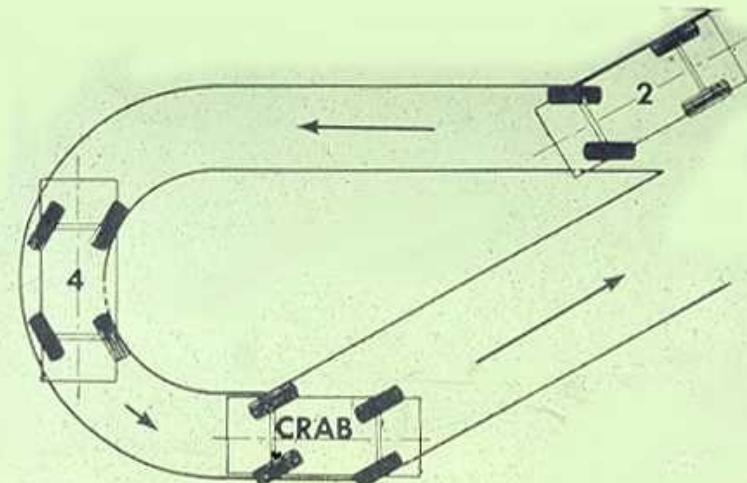


Figure 2-17. 2-Wheel, 4-Wheel and Crab Steering.

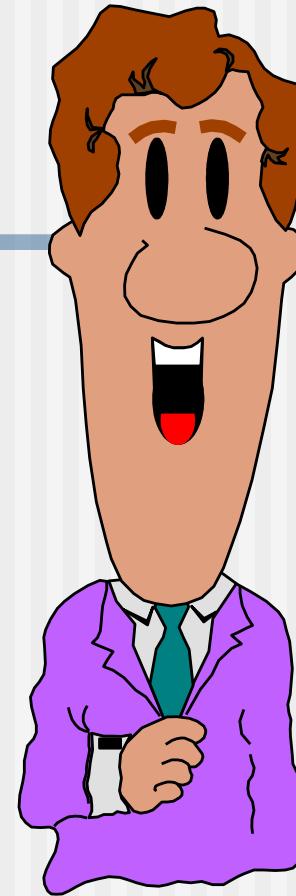
LRT 110

- 4 cylinder Cummins diesel
- EO oil pressure
 - 10 psi idle
 - 90 psi cold oil

LRT 110



LRT-110



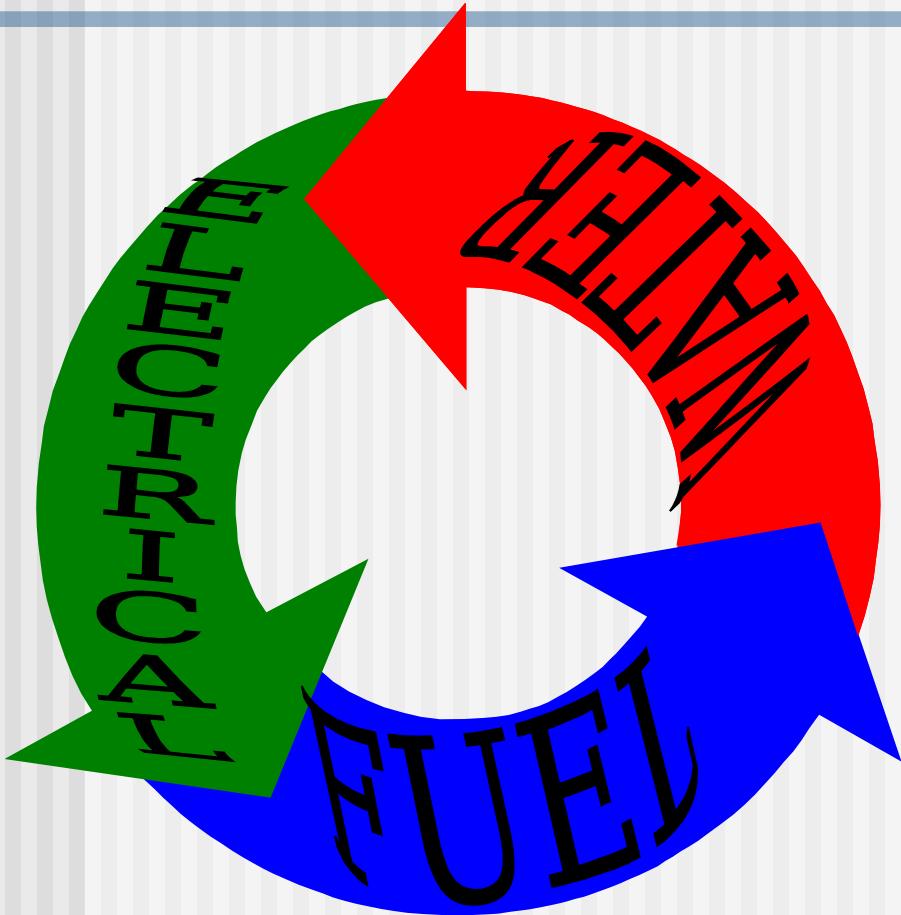
- **Transmission**
 - **4 speed forward/reverse power shift unit**
 - **Manufactured by Funk Equipment**

LRT-110



- **Lower structure**
 - **Transports upper structure**
 - **Consists of:**
 - **Power train**
 - **Axles**
 - **Outriggers**
 - **Operator's cab**

LRT-110



- Fuel, 44 gallons
- 24 volt electrical system
- Two 12 volt batteries.
- Coolant 140-220 degrees.

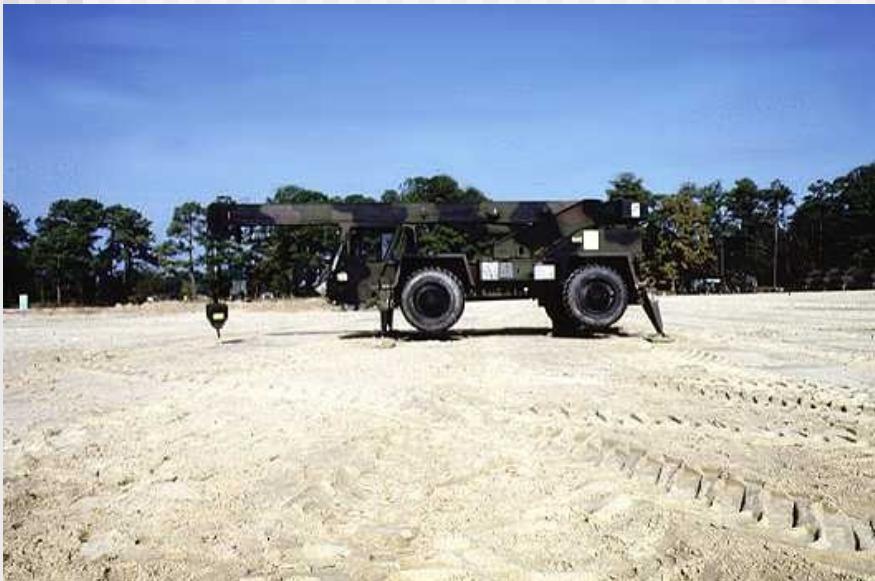
LRT-110



■ Axles

- **Planetary drive with dual mounted steering cylinders.**
- **Rigidly mounted front axle.**
- **Rear axle cradle mounted, allows for oscillation.**
- **Rear axle locks when turntable swings 5 degrees off center.**

LRT-110



- **Upper Structure**
 - Revolves 360 degrees on a bearing and ring gear.
 - Consists of:
 - Boom assembly
 - Counterweight
 - Hydraulic winch

LRT-110 (Boom)



- **Two section telescopic boom**
- **Max length of 35.75 feet**
- **Minimum length of 21.75 feet**

LRT 110 (Counterweight)

- Located behind winch
- 2200 lbs

LRT-110 (Winch)



- **Hydraulically operated**
- **Capacity 350 feet of 1/2 inch wire rope**
- **180 min**

LRT 110 (Winch)

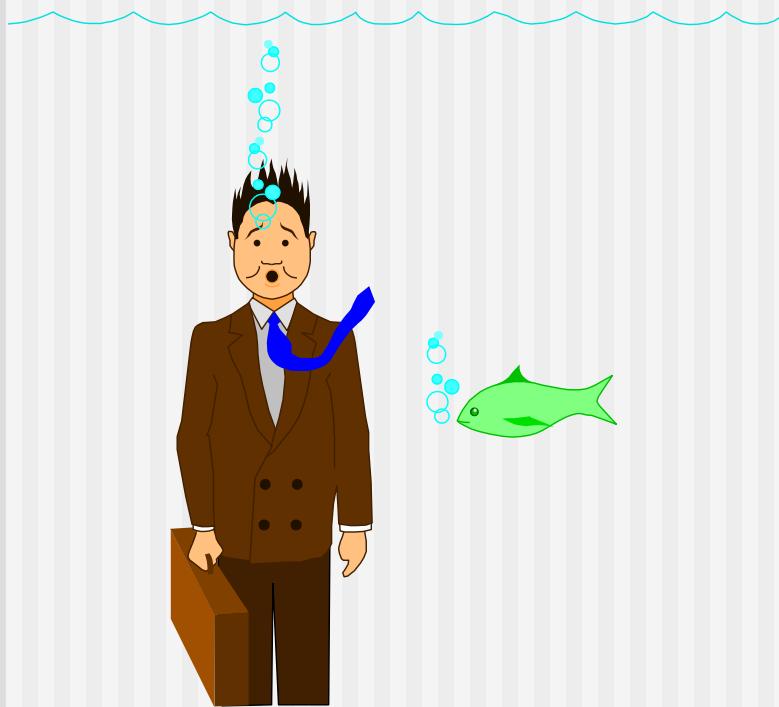
- 1/2 inch
- 6 x 9 IWRC
- **Independent Wire Rope Core**
- IPS
- Improved Plow Steel
- Preformed

LRT-110 (Brakes)

- Hydraulically boosted
- Vacuum assist
 - If engine is not running, crane has no brakes.



LRT-110



- **Capabilities**
 - **Max speed 22 mph**
 - **Fording depth 30 inches**

LRT-110 (Steering)

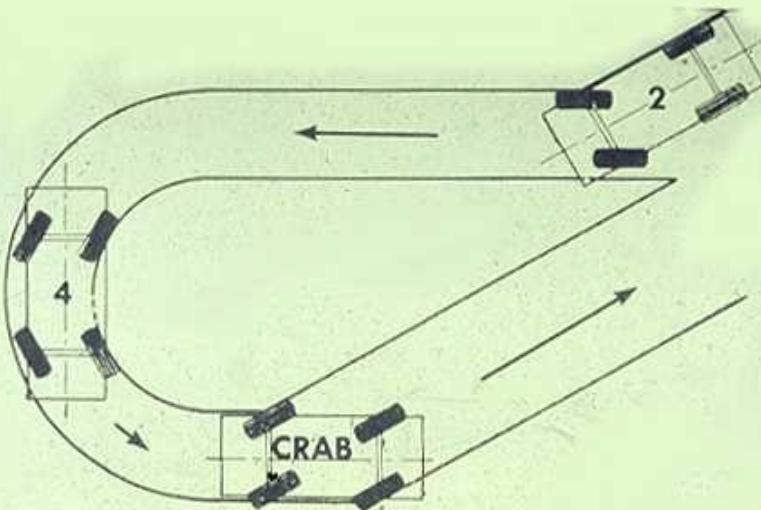
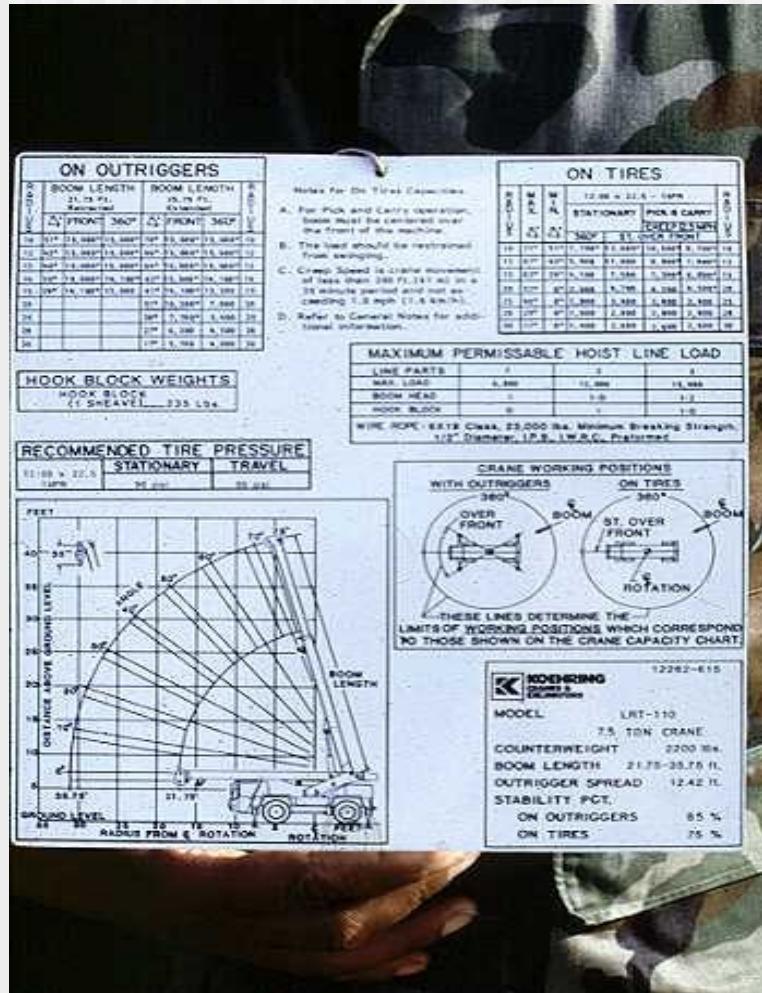


Figure 2-17. 2-Wheel, 4-Wheel and Crab Steering.

- **2 wheel**
- **4 wheel**
- **Crab**

LRT-110



- Load Chart
- Maximum lifting capacity, 15,000 lbs.

LRT-110 (2 Block)



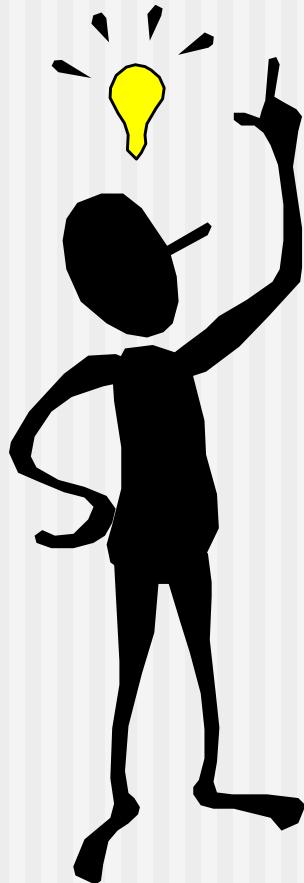
- **Anti-two-block**
- **Warns operator**
- **Hook block with horse head**
- **When activated hydraulic flow stops until operator corrects mistake**

LRT 110 (Limitations)



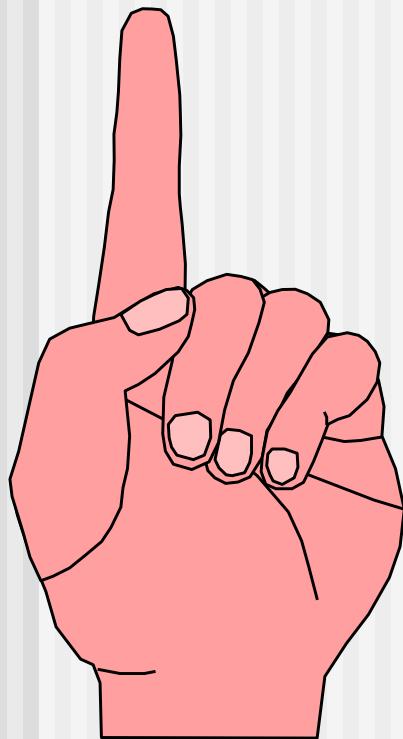
- **Max load 7.5T at 10' radius w/any boom length**
- **350' wire rope**
- **Equipped with 180'**
- **Hook block**
 - **Reeved 3 parts of line**
- **Work platform**

LRT-110



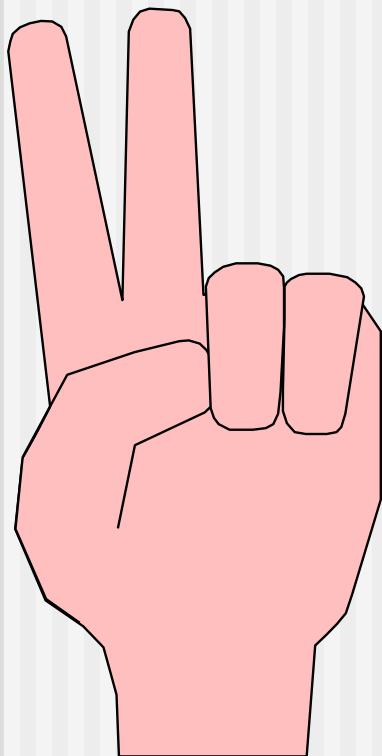
- **All cranes, regardless of size, are rated on their maximum safe lifting capacities.**
 - **6 factors that affect lifting capacity.**

LRT 110



- **1) Parts of line**
 - **Increase**
 - **Lifting capacity increases**
 - **Hook block speed decreases.**
- **Decrease**
- **Lifting capacity decreases**
- **Hook block speed increases.**

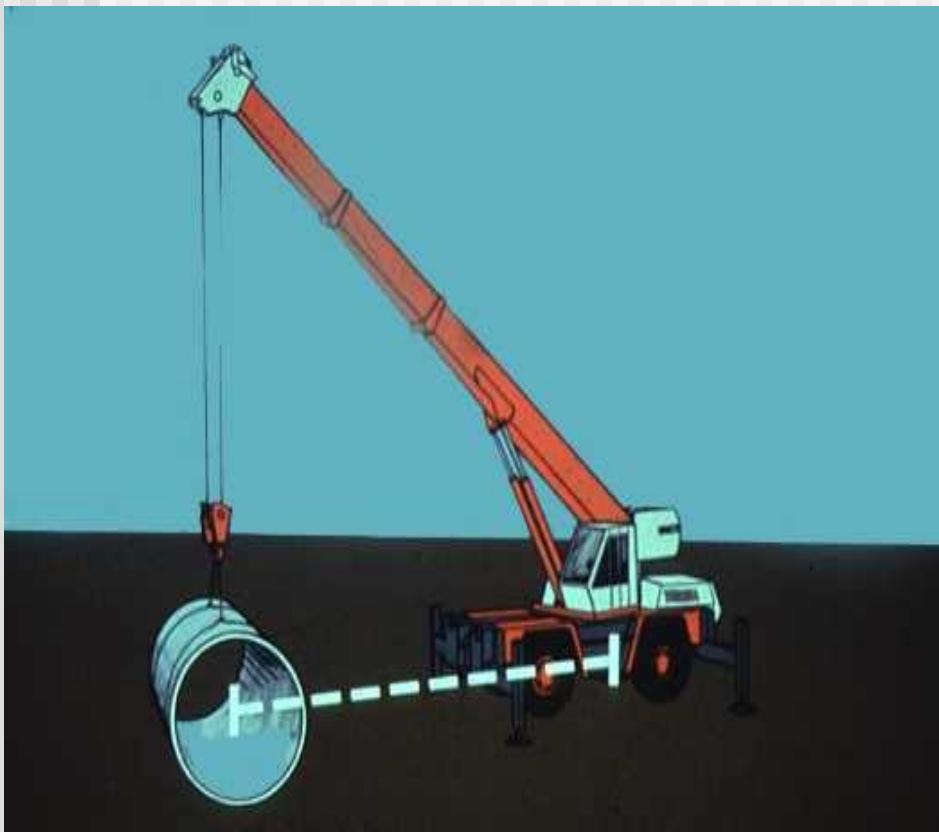
LRT-110



■ 2) Boom angle

- Must be equipped with functioning boom angle indicator
- Boom angle increases
- Lifting capacity increases
- Boom angle decreases
- Lifting capacity decreases

LRT-110



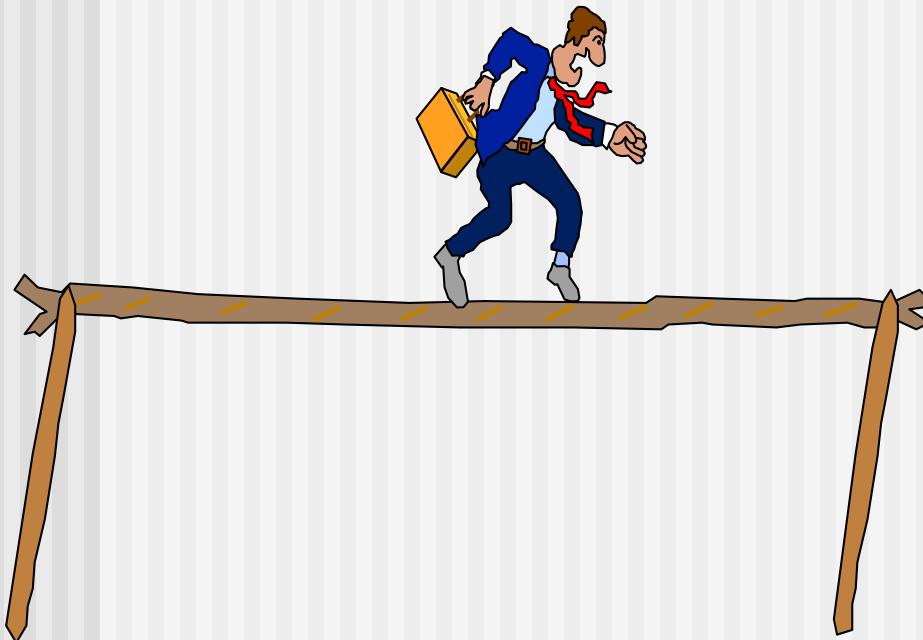
- **3) Radius**
 - **Horizontal distance from center of rotation (before lifting) to center of hook block with load applied**
 - **Increasing radius decreases lifting capacity**

LRT-110



- **4) Boom Length**
 - **Increase**
 - **Lifting capacity decreases**
 - **Decrease**
 - **Lifting capacity increases**

LRT-110

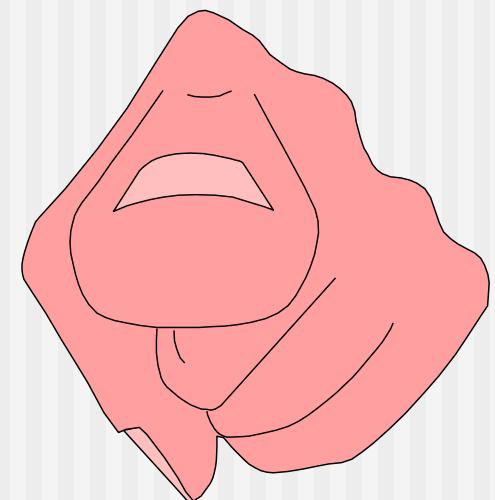


- **5) Stability**
 - **Outriggers**
 - **Stabilize**
 - **Increase lifting capabilities**
 - **Outriggers must be fully extended and down**
 - **Complete weight of crane is off tires**
 - **Crane is perfectly level**

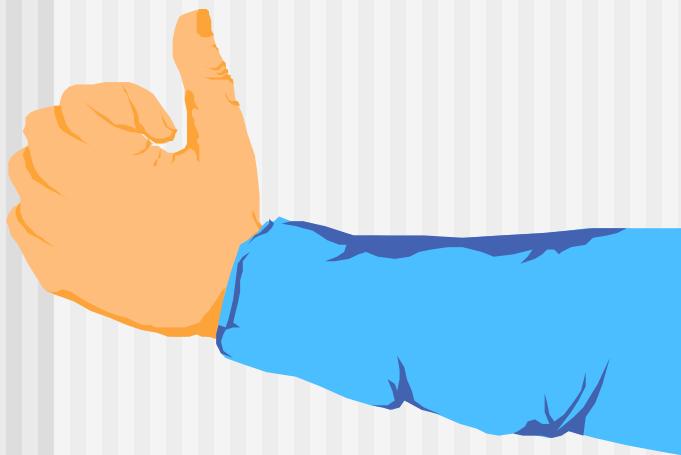
LRT-110

■ 6) Footing

- Positioned on firm and level material to prevent accidental tipping.
- Ground is soft or uneven, wooden cribbing should be used under outrigger pads.

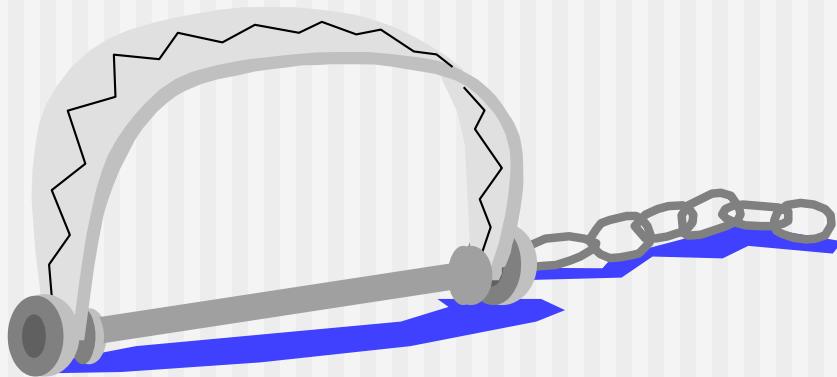


LRT-110



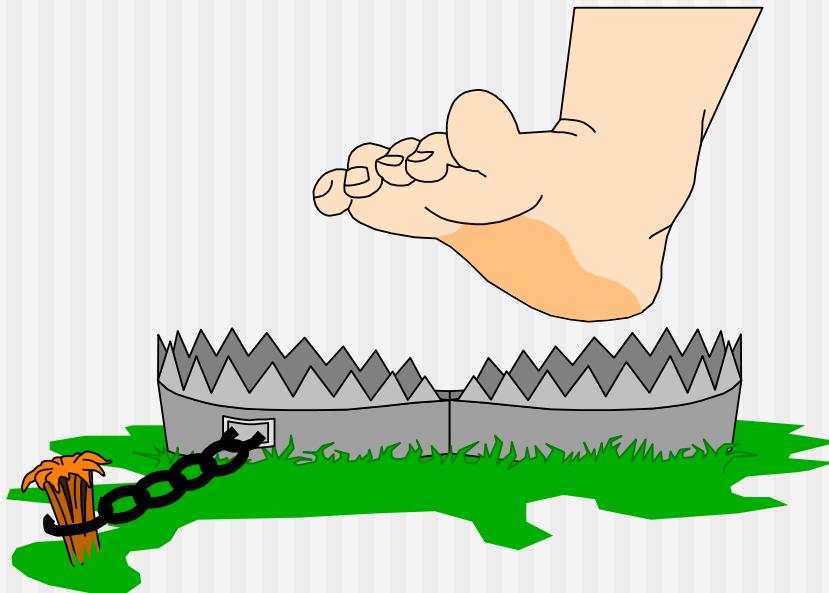
- **Good Footing:**
 - **Level concrete**
 - **Hard packed earthen clay**

LRT-110



- **Fair footing:**
 - Asphalt
 - Gravel
 - Earth

LRT-110



- **Poor footing:**
 - **Moist earth**
 - **Sand**
 - **Uneven terrain**

LRT-110



- **Are there any questions?**